NATIONAL CONFERENCE *of* STATE LEGISLATURES

The Forum for America's Ideas

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RE: GN Docket No. 16-46

Dear Mr. Bartolome:

The National Conference of State Legislatures (NCSL) respectfully submits the following data and state legislative research in response to the Federal Communications Commission FCC 14-76 request for comments and data on actions to accelerate adoption and accessibility of broadband-enabled health care solutions and advanced technologies. State legislatures recognizes the benefits of telehealth services cannot be realized until all Americans have broadband access, including rural and insular communities. Therefore the following focuses on what states are doing to bridge the digital divide in under-served and unserved communities by incentivizing broadband access, specifically with an eye towards enabling telehealth services.

Research shows that it is primarily rural, insular, or low-income communities that are without Internet services or have access at lower speeds. It is also well documented that rural areas have lower access to hospitals and health services. Telehealth services can bridge the gap for Americans to access affordable and convenient health services. However, telehealth cannot be implemented to the extent that it can be truly effective until broadband is deployed and made available in those rural areas of the state. In this response, we look at what states have specifically proposed in 2017 to address broadband deployment. Included in this letter are direct responses from state legislators in Georgia, Alaska and Oregon, addressing their concerns and outlining their vision for telehealth in their state.

2017 Rural Broadband Legislation

At least 22 states have introduced more than 31 bills or resolutions related to rural broadband in 2017. **Colorado** enacted H. 1174, which streamlines their regulations, and allows for an exception for rural counties from the limitations on the establishment of a local improvement district to fund the construction of a telecommunications service improvement for advanced service. **Indiana** adopted H. 1626, which requires a study of their Universal Services for Telecommunications, and urges the legislative council to assign a committee the topic of rural broadband service in the State. **Kentucky** adopted H. 343, which creates the Kentucky Communications Network Authority, and requires rural telecommunications representation on their broad, which oversees the growth and maintenance of KentuckyWired—the commonwealth's open-access broadband network.

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Maryland's governor signed an executive order MD 14 that establishes a Rural Broadband Office and complements the legislatures' enacted bill H. 1169, the Connecting Rural Maryland Act. The law establishes the task force on Rural Internet, Broadband, Wireless, and Cellular Service and requires that the task force study and make recommendations on ways counties can work together to obtain federal assistance to improve communications services and accessibility. **New Mexico** adopted a resolution, H.Res. 96, urging the congressional delegation to ensure that the state is granted no less than its pro-rata share of any federal stimulus funding and requesting the establishment of a broadband task force to study all proposals submitted for broadband stimulus funding. Two bills were signed into law: S. 308 amends the Rural Telecommunications Act of New Mexico to update the State Rural Universal Service Fund provisions and establish a broadband program administered by the public regulation commission to facilitate the expansion of broadband service in rural areas. S. 53 updates the New Mexico Telecommunications Act to provide for Public Regulation Commission jurisdiction over incumbent local exchange carriers and their investment in telecommunications and broadband infrastructure.

New Hampshire enacted H. 238 to create a committee to study broadband access to the Internet. It is required to explore means to expand the adoption of wireless and wired broadband technologies into rural areas with low adoption rates. **Nevada**'s S. 53 will develop a strategic plan for the use of broadband services in this state, and will apply for state and federal funding to expand broadband services. The state must expand telehealth services to increase access to health care in this state and expand fiber infrastructure.

Oregon's H. 2091 authorizes the Public Utility Commission to use universal service fund monies to encourage broadband service availability and to provide support to telecommunications carriers that provide both basic telephone service and broadband service; and for other purposes. **Vermont** passed S. 34 to establish a Rural Economic Development Initiative to promote and facilitate community economic development in the small towns and rural areas of the state. The Initiative shall provide the following services to small towns and businesses in rural areas: (1) Identification of grant or other funding opportunities available to small towns, businesses in rural areas, and industrial parks in small towns and rural areas that facilitate business development, siting of businesses, workforce development, broadband deployment, infrastructure development, or other economic development opportunities. **West Virginia** enacted H. 3093 to provide loan insurance for commercial loans used for the expansion of broadband service to unserved or underserved areas; establishes the broadband enhancement council. The law creates of the Broadband Enhancement Fund, and requires the establishment of a mapping of broadband services in the state.

Digital Literacy

Ten states proposed legislation targeting rural broadband adoption through digital literacy programs in 2017. **California** should be highlighted for their bill, which just passed out of the legislature, and is awaiting the governor's signature. CA A 1665 directs money from the Broadband Adoption Account to be available for grants to increase publicly available or after-school broadband access and digital inclusion.

Maine enacted a digital literacy funding bill and is further considering legislation that would direct the ConnectME authority to provide funding for the provision of digital literacy programs, particularly in rural areas of the state. **North Carolina** enacted NC S 257, which creates a grant program for promoting the development and adoption of broadband internet access services and provides certain standards that must be met by a local community to benefit from the grants. The law allows an electric cooperative to provide broadband service within or without the cooperative's service area. The **District of Columbia** also introduced legislation that would establish the Digital Literacy Council to promote digital literacy for residents, improve education and guide communities as they support residents. Other states propose digital literacy legislation directed towards schools and youth programs.

Expanding Benefits and Understanding Health Provider Challenges
As NCSL highlights in continually updated research, the health care workforce is stretched to its limits in most states. Despite programs operated by state, federal and local governments aimed at recruiting and retaining primary care professionals to rural and underserved areas, the need outpaces the supply in many communities. Also, many of the current primary care physicians are nearing retirement and the numbers to replace them are not sufficient.

For states with large rural populations, telehealth has emerged as a cost-effective alternative to traditional face-to-face consultations or examinations between provider and patient. Increasingly, it is also becoming a tool to overcome access barriers for other populations, such as aging adults, as well as a means to reduce costs and burdens for patients.

Senator Gratwick's bill, enacted the legislative session to create the Maine Telehealth and Telemonitoring Advisory Group, responsible for providing reports on evaluating technical difficulties related to telehealth and telemonitoring services. It also creates grants that support the development of the technology infrastructure necessary to support the delivery of health care services through telehealth and that support access to equipment, technical support and education related to telehealth for health care providers. Commercial coverage had some challenges, Senator Gratwick's commercial carrier bill did not survive the governor's veto, and will need to be resubmitted in 2019.

Maine's Medicare telemedicine policy does present a significant challenge for telehealth services at hospitals. Medicare won't cover telemedicine provided in a Metropolitan Statistical Area (MSA), this means Penobscot and Cumberland counties are impacted.

In Georgia, Representative Parsons outlines the work of the Rural Development Council, which held five sets of two-day public meetings in rural areas of the state, since May, to discuss broadband access and telehealth services. In Metter, a community in South Georgia, about 50 miles inland from Savannah, healthcare was the focus of the meetings. One important point that came out of the discussions were concerns regarding the terms used in healthcare circles, and how "telehealth" and "telemedicine" references may be to old technologies. For example, to some health professionals the terms refers to a telephone consultation. To some, it simply means sending information via facsimile.

The Georgia Department of Public Health reported that there is a public health center in all of Georgia's 159 counties. It further reported that every center has broadband connectivity and telehealth terminal equipment, enabling the use of telehealth at those centers. When asked how much the telehealth equipment is used, many of the centers' representatives discussed how there is only one healthcare professional who operates telehealth equipment, and that by the time that individual can locate and set up a physician at a remote location, it is easier to just proceed the non-technical way. The concern becomes that telehealth is not used as it should, even when available, because of the reluctance of healthcare professionals to accept it.

Conclusion

While state efforts could be accelerated to the extent that the FCC and NTIA can support state and local broadband initiatives through grants and market incentives, it is just as important that the FCC recognize the legitimacy of state, municipal and public partnership fiber networks, particularly in rural communities where there is a lower and less certain return on infrastructure investments. States need the autonomy and freedom to innovate solutions on bridging the digital divide within their communities.

Sincerely,

Danielle Dean
Director, Communications and Technology Policy
National Conference of State Legislatures

Alaska House Speaker Bryce Edgmon's Comments to NCSL Telecom and Technology Policy Director on Broadband-Based Telehealth Needs in Alaska
September 7, 2017

- **Where are broadband enabled health services and technologies critically needed in your state but are insufficient or unavailable?**

The most critical need for broadband healthcare services in Alaska is in our rural communities, many of which are remote and isolated to a degree that is unparalleled in the Lower 48 states. In these regions of Alaska, without the availability of broadband enabled healthcare services even the most basic treatments and consultations would require expensive travel far from home.

In recent years, the FCC's Rural Health Care Universal Services Support program has enabled providers in remote rural Alaska to offer telehealth services that dramatically improve access to care. These services have expanded locally available treatment options, accelerated diagnosis and treatment, and helped to lessen the need for travel for care. Also through telehealth, local availability of mental and behavioral healthcare and substance abuse services has grown significantly.

- **How can the Commission better facilitate the deployment of services and technologies as well as consumer adoption in those areas?**

The most immediate and effective action the FCC can take to better facilitate the deployment and delivery of broadband telehealth services in areas of Alaska with the greatest need is to increase the Rural Health Care Universal Service Support Budget.

For most of its 20-year existence, the budget's $400 million cap has been adequate to meet the demands of the program. However, following two decades of advances in technology, increases in demand, and the effects of inflation, funding needs may exceed the cap for the first time. If the budget cap is reached and funding has to be prorated, costs for Alaska rural telehealth providers will increase so dramatically that continuing to offer these services, much less expand them, will be all but impossible.

After decades experiencing some of the most extreme challenges in the country, our rural healthcare providers and the populations they serve have eagerly adopted the broadband based technologies that so dramatically improve the level of care available in their communities.

- **Any other comments you may have about Alaska's discussions, concerns, or solutions to provide a statewide telehealth/telemedicine network**

Earlier this year I introduce House Joint Resolution 14 in the Alaska Legislature. This legislation urges the FCC to increase the Rural Health Care Universal Service Support Budget sufficiently to adjust for inflation and to allow communities to take advantage of the advances in technology and services available with increased broadband. In doing so, the FCC will allow Alaska healthcare providers to continue to expand healthcare care services in rural parts of the state to levels thought to be impossible even a few years ago.

Broadband-enabled health care solutions

No longer viewed as a luxury and recognized as the fourth utility, broadband is a critical component of community infrastructure, enabling innovation and new opportunities in education, health and economic development.[1] Communities in Oregon who find themselves on the wrong side of the digital divide will increasingly struggle to recruit and retain businesses, provide quality education and deliver healthcare innovations through telemedicine (also known as telehealth and healthIT)--increasing health care access, improving patient outcomes and bending the cost curve. Innovations in telemedicine and patient-centered care are a key strategy in the State of Oregon's commitment to health care transformation and coordinated care.

Oregon's Community Care Organizations (CCO) are working to transform health care delivery through the following measures:

1. ***"CCO coordination:*** *CCO community coordination to address the social determinants of health has begun but must be accelerated and strengthened to reflect that health is largely determined by where people live, work, learn and play; focused improvement must extend beyond medical care.*
2. ***CCO integration:*** *The integration of physical, behavioral and oral health care services has improved but must be accelerated to realize the vision of an integrated delivery system.*
3. ***CCO integration:*** *The integration of physical, behavioral and oral health care services has improved but must be accelerated to realize the vision of an integrated delivery system.*
4. ***Value-based payment****: Continuing Oregon's progress with payment reform is critical for financial sustainability and improved health outcomes.*
5. ***CCO governance and structure:*** *CCOs have implemented community feedback mechanisms but the community's voice should be strengthened. Governance structures must reflect local community and public needs and be transparent and accountable; CCOs must invest savings in needed community services."*[2]

Ultimately, increased broadband availability and accessibility coupled with innovations in telemedicine are critical to the success of Oregon's vision for healthcare transformation. Oregon is making coordinated healthcare delivery accessible where Oregonians live, work, learn and play, while capping the growth in healthcare costs—resulting in better health, better care, and lower costs. Achieving this "triple aim" includes increased adoption of electronic health records (EHRs), the expansion of the OHSU Telemedicine Network, and other healthIT innovations.

In Oregon, the adoption of EHRs has been high, but persistent gaps remain. Patient portals and patient access to clinic visit notes are key components of a patient-centered approach to health care. In order to improve health outcomes, patient data needs to be highly reliable and available where it is needed most. However, in many rural communities neither providers nor patients

[1] Cecilia Kang, "Court Backs Rules Treating Internet as Utility, Not Luxury," *The New York Times*, June 14, 2016, http://www.nytimes.com/2016/06/15/technology/net-neutrality-fcc-appeals-court-ruling.html.

[2] Zeke Smith, "Letter to Governor Kate Brown Re: Oregon Health Policy Board, CCO Listening Session Recommendations Final," Oregon Health Policy Board, (March 2, 2017), http://www.oregon.gov/oha/OHPB/Documents/OHPB-CCO-Listening-Session-Recommendations-Final.pdf.

have the broadband access necessary to make telemedicine a reality in terms of individual broadband applications.

In discussing broadband access, it is important to recognize that the term broadband refers to a variety of platforms that offer varying levels of speed and reliability (other than dial-up), including: digital subscriber line (DSL), cable modem, fiber, wireless and satellite—suffice to say, not all broadband technologies are created equal. In deciding on a particular platform, it is important to weigh their relative advantages and disadvantages in terms of speed, reliability, scalability and cost.

Though broadband may refer to a variety of technologies, the Federal Communications Commission (FCC) recently revised the standard for broadband services upward in January of 2015. The FCC standard established a minimum benchmark of 25 megabits per second (Mbps) for downloads and 3 Mbps for uploads (up from 4 Mbps and 1 Mbps respectively).[3] Under the FCC standard, only 55% of rural Oregon residents have access to broadband services, as compared to 94% of urban residents have access.[4] While access to broadband is condition precedent for the deployment of telemedicine, Oregon's digital divide is also exacerbated by low rates of adoption and utilization within Oregon's rural communities—influenced by income and the cost of rural broadband.

In the case of income, a White House Issue Brief indicated that less than 50% of households in the lowest income quintile had internet access compared to 95% of households within the highest income quintile.[5] As for the cost of rural broadband services, the 2016 Oregon Connectivity Report found that Education Service Districts (ESDs) in rural areas paid as much as $24 Mbps as compared to less than $3 Mbps in urban ESDs.[6] As is so often the case, those with the least ability to pay face the highest prices—exacerbating existing inequalities.

Until recently, discussions about the digital divide—Oregon's included—have largely been anecdotal and have tended to place undue emphasis on the issue of broadband access. The development of the digital divide index (DDI), by the Mississippi State University (MSU) Extension Service, provides an objective measure of the digital divide that also considers socioeconomic factors. The DDI is a function of both a community's Infrastructure Adoption Characteristics (INFA) and Socioeconomic Characteristics (SE).[7] According to MSU's 2015-15 DDI index, there were ten counties in Oregon with a DDI that exceeded 50% and ranging from a low of 54.99% in Baker County to 90.1% in Wheeler County. Even worse, five of these digitally divided communities lack critical access to a hospital. Several of these findings are summarized in the table below.

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[3] Steve Lohr, "F.C.C. Sharply Revises Definition of Broadband," *Bits Blog*, 1422553358, http://bits.blogs.nytimes.com/2015/01/29/f-c-c-sharply-increases-definition-of-broadband/.

[4] "Strategies for Broadband Infrastructure Deployment, Adoption and Utilization in Rural Cities and Counties" (Oregon Business Development Department, December 12, 2016), https://www.oregonlegislature.gov/citizen_engagement/Reports/12012016-HB3274OBDDRuralBroadbandStrategiesReport.pdf.

[5] Ibid.

[6] "Oregon Connectivity Report: K-12 Broadband and Digital Learning Policy Academy" (Education Superhighway, April 2016).

[7] "Strategies for Broadband Infrastructure Deployment, Adoption and Utilization in Rural Cities and Counties."

Taken together, there are approximately 424,000 Oregonians without access to a wired connection capable of 25 Mbps, and around 115,000 Oregonians do not have any wired internet providers where they live.[8] This limits or prevents access to electronic health records, patient portals, and opportunities for telehealth and telemedicine delivery.

County	*Population*	*DDI Mississippi State University, 2014-15 (DDI and quartile)*		*Oregon Broadband Coverage Map, June 2016*	*Critical Access Hospital present?*	*Medically Underserved Area/Population?*
Baker	16,059	54.99	4th	Areas with no service	Yes	Yes
Curry	22,173	54.41	4th	Areas with no service	Yes	Yes
Grant	7,158	68.27	4th	Areas with no service	Yes	Yes
Harney	7,292	65.72	4th	Areas with no service	Yes	No
Josephine	85,904	53.36	4th	Areas with no service	No	Yes
Klamath	66,443	47.92	3rd	Few areas with no service	No	Yes
Lane	369,519	34.19	2nd	Areas with no service	Yes	Yes
Malheur	30,439	65.08	4th	Areas with no service	No	Yes
Sherman	1,710	65.67	4th	Limited to no areas with no service	No	Yes
Wallowa	6,946	63.50	3rd	Areas with no service	Yes	Yes
Wheeler	1,344	90.17	4th	Few areas with no service	No	Yes

Furthermore, 451,000 Oregon residents only have access to one wired broadband provider—the absence of competition increasing prices and suppressing adoption.[9]

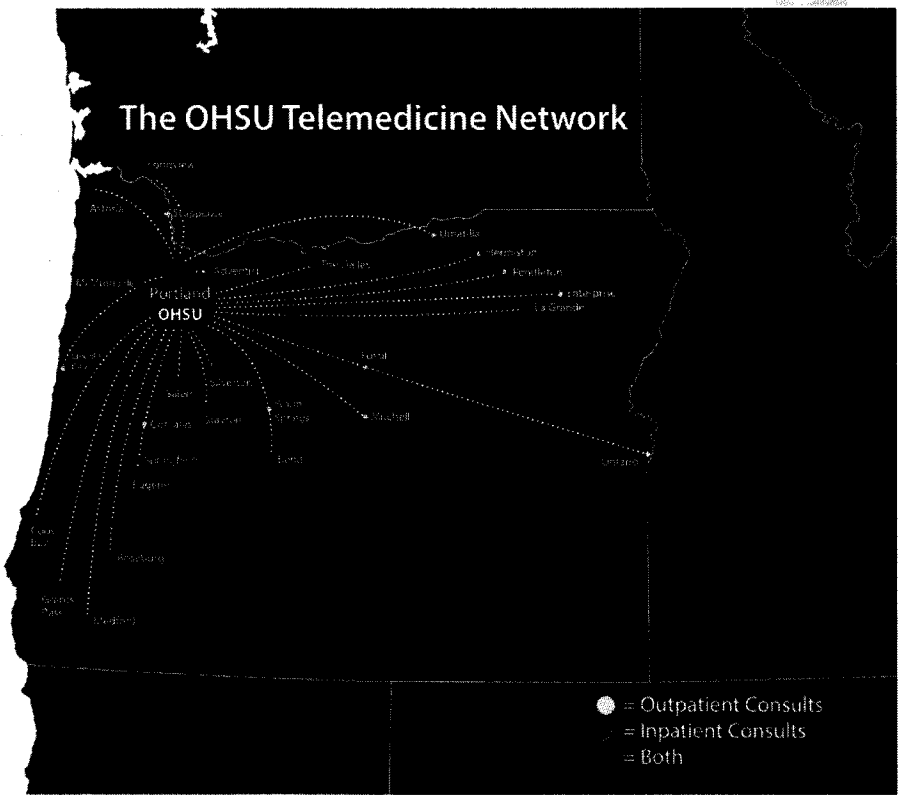
Beyond the FCC broadband standard of 25 Mbps to support individual broadband applications, Oregon's digital divide is that much deeper when it comes to the bandwidths needed to support telemedicine at an institutional level. According to the Open Technology Institute, institutional telemedicine applications require a minimum of 50 Mbps and are optimal at 1 gigabit per second (Gbps).[10] Telemedicine at an institutional level, encompasses more than patient portals and access to EHRs, it enables physicians and specialists to examine, monitor, diagnose and treat

[8] https://broadbandnow.com/Oregon

[9] "Strategies for Broadband Infrastructure Deployment, Adoption and Utilization in Rural Cities and Counties."

[10] "The Art of the Possible: An Overview of Public Broadband Options" (New America Foundation, The Open Technology Institute, 2014), http://www.ctcnet.us/publications/the-art-of-possible-an-overview-of-public-broadband-options/.

patients in collaboration with local physician through real-time audio-video communication and sharing of diagnostic images.[11] In Oregon, the Oregon Health and Science University has been a leader in telemedicine—establishing the OHSU Telemedicine Network and serving 27 communities.



Currently, the OHSU Telemedicine Network provides remote access to a variety of medical specialties, including: pediatric intensive care, neonatal intensive care, stroke, psychiatry, newborn medical genetics and pediatric palliative care.[12] According to the OHSU, the benefits of telemedicine include:

- *"Provides patients access to the latest specialty and subspecialty care not otherwise available in their community.*
- *Spares families the time and expense of traveling to an out-of-town medical center to support a loved one who is receiving care.*
- *Avoids risky, expensive and unnecessary transports. More than 45 percent of the approximately 1,200 patients treated to date have been able to stay in their home communities.*
- *Reduces health care costs. The OHSU Telemedicine Network has saved more than $9.5 million in transport expenses alone.*
- *Available 24 hours a day, seven days a week in emergency rooms and labor and delivery units. Telemedicine also increases access to ambulatory care and provides in-home patient monitoring.[13]"*

Notwithstanding, the benefits of the OHSU Telemedicine Network, many rural communities lack the broadband infrastructure to participate—notably, there is not a single participant in the network within southeast Oregon (see below).

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[11] "OHSU Telemedicine Network Fact Sheet" (Oregon Health and Sciences University, December 15, 2015), http://www.ohsu.edu/xd/health/for-healthcare-professionals/telemedicine-network/news/telemedicine-media-tools/upload/Telemedicine-FactSheet-Dec-15-2015.pdf.

[12] Ibid.

[13] Ibid.

Without addressing Oregon's digital divide through increased broadband availability, affordability and adoption, the promise of telemedicine will remain unavailable to the under-served rural communities whom stand to benefit the most. Absent action at the federal and state level, through enhanced regulation, public-sector investment, market incentives and other measures, the digital divide will only continue to deepen as increasing bandwidth requirements for telemedicine and other applications outpace the deployment of broadband infrastructure.

The prevailing regulatory theory underlying the implementation of the 1996 Telecommunications Act since its passage was based on competition between networks (*e.g.*, cable, DSL, fiber-optic and 4G mobile)—a flawed assumption that has failed to promote meaningful competition and broadband investment in rural communities.[14] Neither DSL nor 4G mobile provided a viable alternative in terms of speed and reliability, whereas the ubiquity and dominance of cable networks has limited investment in fiber-optic networks. [15] Furthermore, market-division has further undermined competition—particularly in the market for faster tier speeds. In 2015, 75% of American households had only one internet service provider (ISP) offering speeds of 25 Mbps or greater.[16] The failed promises of deregulation and cross-network competition have continued to put downward pressure on broadband adoption rates. Broadband adoption peaked at 70% in 2013 and dropped to 67% in 2015, essentially plateauing.[17]

Within the "middle-mile" market for broadband services, neither competition nor meaningful regulations are present, with over 95% of locations served by two providers at most and American Consumers being subject to abusive pricing and overcharges amounting to $150 billion since 2010 according to the Consumer Federation of America.[18] Given the extensive data collection undertaken and draft rules developed by the FCC on the uncompetitive "middle-mile" market segment, it should recirculate the proposed final rule and simplified regulatory framework for final approval. Absent meaningful regulation within this segment, the barriers to entry for competition will likely remain insurmountable.[19] A lack of competition being exacerbated by the most recent wave of telecom consolidations, CenturyLink's $34 billion acquisition of Level 3 being the most recent.[20] Furthermore, the FCC can increase the minimum required speed of 10 Mbps for federally funded broadband investments in rural areas to align with the FCC standard of 25 Mbps. The hundreds of millions of dollars invested in these programs should not relegate "rural Americans to third-class connectivity"[21]—they deserve better.

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[14] Susan Crawford and Ben Scott, "Be Careful What You Wish for: Why Europe Should Avoid the Mistakes of US Internet Access Policy," *Stiftung Neue Verantwortung*, 2015, https://www.stiftung-nv.de/sites/default/files/us-eu.internet.access.policy.pdf.

[15] Ibid.

[16] Ibid.

[17] 1615 L. Street et al., "Home Broadband Use Has Plateaued," *Pew Research Center: Internet, Science & Tech*, December 18, 2015, http://www.pewinternet.org/2015/12/21/home-broadband-2015/pi-2015-10-21_broadband2015-01/.

[18] Susan Crawford, "The Internet Ripoff You're Not Protesting | Backchannel," *WIRED*, July 12, 2017, https://www.wired.com/story/the-internet-ripoff-youre-not-protesting/.

[19] Ibid.

[20] "CenturyLink to Buy Level 3 for $34 Billion in Cash, Stock," *Bloomberg.com*, October 31, 2016, https://www.bloomberg.com/news/articles/2016-10-31/centurylink-agrees-to-buy-level-3-for-34-billion-in-cash-stock.

[21] Susan Crawford, "The Internet Ripoff You're Not Protesting | Backchannel," *WIRED*, July 12, 2017, https://www.wired.com/story/the-internet-ripoff-youre-not-protesting/.

At the state level, there is need for enhanced leadership and investment. According to the Fifty States of Broadband Report, the state of Oregon ranks 13th nationally with respect to broadband investment.[22] While Oregon performed well in terms of availability and adoption, and benefits from the absence of regulations that restrict or burden public broadband investment, it lags behind many of its peers in terms of driving meaningful use and encouraging growth and investment through state leadership. The 2016 report, entitled *"Strategies for Broadband Infrastructure Deployment, Adoption and Utilization in Rural Counties,"* prepared by the Oregon Business Development Department (OBDD) outlines a series of steps the state of Oregon can undertake to address its digital divide. Notably, it recommends the establishment of an Oregon Broadband Office, development of a State Broadband Strategic Plan and promotion of public-private partnerships. While these efforts could be accelerated to the extent that the FCC and NTIA can support state and local broad-band initiatives through grants and market incentives, it is just as important that the FCC recognize the legitimacy of state, municipal and public partnership fiber networks—particularly, in rural communities where there is a lower and less certain return on infrastructure investments. Lastly, clearer guidance on the use of interstate right-of-way coupled with dig-once policies could facilitate increased broadband investments and reduce costs.

While the State of Oregon will continue to fly with its own wings in seeking to bridge the digital divide, we stand ready to partner with the FCC on meaningful regulation and in facilitating enhanced investment and public-private partnerships.

[22] "The 50 States of Broadband: A State-by-State Study on The State of Broadband Investment and Activity in Each American State" (Rural Telecon; Strategic Networks Group, February 9, 2017), http://sngroup.com/wp-content/uploads/2017/02/50-States-of-Broadband-February-2017-update.pdf.

Broadband and Telehealth

Moving Georgia Forward in Technology and Healthcare

Don Parsons
State Representative, North Cobb County, GA

Availability of broadband is something that millions of Americans have come to take for granted in suburban and urban areas of our nation. As is the case with most people in those suburban and urban areas who have used the internet since its widespread use began in the 1990s, the infrastructure carrying my internet service has evolved from dial-up on our family land line to high speed, large bandwidth broadband service from my telco provider today. Unfortunately, that is not the case for people in vast areas of rural Georgia and rural America today. For millions of them, the service has not evolved.

Over the last two years, I have met with many people in rural Georgia who do not have broadband availability. I have visited schools where, although broadband is available in the facility, it is not available at the students' homes. I have spoken with community leaders who know that they cannot attract investment and jobs without broadband availability. Existing small business owners in those communities cannot transfer digital files necessary for carrying out normal business transactions; functions that are carried out in metro areas without a second thought. The problems caused, and the opportunities lost, by the lack of broadband are legion, but perhaps the most critical issue relates to healthcare. Any time that healthcare is discussed in rural Georgia, and I am certain the same is true across America, the lack of broadband necessary to implement telehealth is a major part of the discussion.

Affordable healthcare is important to all Americans, but for people who live in rural Georgia, and for its community leaders, the issue takes on even greater significance, and for many reasons. As its population declines, hospitals in rural Georgia continue to close. My respect for all the healthcare professions has grown, as I have observed the dedication and professionalism of physicians, nurses, administrators and others who work tirelessly to keep those facilities open to provide services, many of which are life-saving services to Georgians. Strokes, heart attacks, automobile crashes and accidents involving farm equipment are just some of issues that require immediate attention and treatment in a hospital emergency room. From where I live in Metro Atlanta, I can be at a major hospital within fifteen minutes. In addition to that hospital, there are others within twenty miles of my house. That is not so for rural Georgia.

Emergency treatment requires specially equipped centers and health professionals trained in emergency care. Most health services, however, do not require emergency care. From presentations on healthcare that I have heard over the last several months, I have learned that many rural hospitals are doing more to screen those coming to emergency rooms, and if the issue is not truly of an emergency nature, they will be treated in an alternative setting that does not incur the high cost of emergency services. The use of emergency rooms for non-emergency

care is an issue that drives the cost of healthcare up, especially in rural areas where up to forty-eight percent of the population is uninsured.

Can telehealth, or as it is also referred to, "telemedicine" fill a vital and extremely important void in access to certain aspects of healthcare, particularly in rural Georgia, and in rural America? I am certain that it can. I am also certain that it already does so in some situations and in some areas, but I am absolutely convinced that not to anywhere the extent that is possible. I recently heard presentations from several representatives from the healthcare professions that have reinforced my opinions on this issue.

The terms "telehealth" and "telemedicine" have been around for a long time. They are not new. Therefore, I have discovered that when these terms are used in healthcare circles, the references may be to very old technologies. For example, to some health professionals the terms refer to a telephone consultation. To some, it simply means sending information via facsimile. The Georgia Department of Public Health reported that there is a public health center in every one of Georgia's 159 counties. It further reported that every one of those centers has broadband connectivity and telehealth terminal equipment, enabling the use of telehealth at those centers. When I asked how much the telehealth equipment is used, I was told that many of the centers are staffed with only one healthcare professional, and that by the time that individual can locate and set up a physician at a remote location, it is easier to just proceed the old non-technical way. I can certainly understand how that happens, but it leads me to believe that telehealth is not used as it should, even when available, because of a reluctance in the healthcare professions to accept it.

These might be considered functions of telehealth, but they are not the functions that, with today's technology and broadband deployment to homes, have the power to revolutionize healthcare and bring costs down. My vision of telehealth, and I believe a lot of people share this vision, is that of the healthcare professional, from his or her office, consulting with, testing and diagnosing patients, over the internet, via broadband, right in the patient's home. I believe it is likely that the cost savings to Medicare and Medicaid alone could fund the universal deployment of rural broadband.

In order for true telehealth to be implemented in Georgia, broadband must be made available throughout the state. According to information from the FCC (Federal Communications Commission), 115 of Georgia's 159 counties are underserved or unserved by broadband. All but one are rural. It is a problem across the state, however, it appears that South Georgia, as it continues to lose population, is where the problem is the greatest. The healthcare professions must be adaptable to change. The deployment of broadband and the implementation of telehealth can provide better healthcare at less cost. I have spoken with FCC Chairman Pai about this issue, and I am happy to write that he is a strong proponent for rural broadband. I believe that the FCC is looking for ways to help, including identifying possible revenue streams for funding. In the meantime, I will continue to do everything I can, as a Georgia legislator, to

provide broadband, and the benefits that are possible with broadband, including telehealth, to the people throughout Georgia, regardless of where they live.

END